



N is \oplus

$$v_i = 5 \text{ m/s North}$$

$$v_f = 7 \text{ m/s North}$$

what is Δv $\Delta v = ?$

$$\Delta v = v_f - v_i$$

$$\Delta v = 7 \text{ m/s} - 5 \text{ m/s}$$
$$= 2 \text{ m/s N}$$



N is \oplus

$$v_i = 7 \text{ m/s North}$$

$$v_f = 0 \text{ m/s North}$$

what is Δv $\Delta v = ?$

$$\Delta v = v_f - v_i$$

$$\Delta v = 0 \text{ m/s} - 7 \text{ m/s}$$
$$= -7 \text{ m/s S}$$

$$\Delta v = -7 \text{ m/s (S)}$$

$$m = 330 \text{ kg}$$

$$\Delta P = \text{impulse} = ?$$

$$\Delta P = m (\Delta v)$$

$$= (330 \text{ kg})(-7 \text{ m/s})$$

$$\Delta P = -2310 \text{ kg} \cdot \text{m/s S}$$

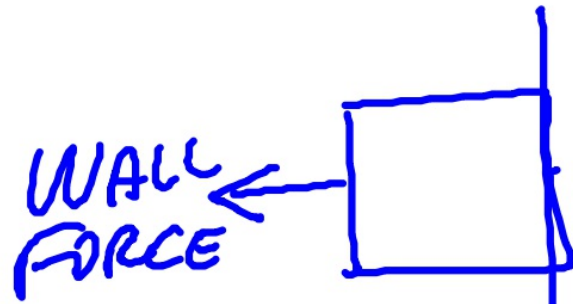
$$\Delta p = -2310 \text{ kg m/s } \checkmark$$

$$\Delta t = \text{contact time} = 2 \text{ s}$$

What was the force the
WALL PLACE ON THE headless
horseman? $F = ?$

$$\Delta p = F \Delta t$$

$$\frac{-2310 \text{ kg m/s}}{2 \text{ s}} = \frac{F(2 \text{ s})}{2 \text{ s}} = -1155 \text{ N } \checkmark$$



1155N S
WALL ON
Horseman

1155N N
Horseman
PUT ON WALL